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DIVISION 10 - SPECIALTIES

SECTION 10100

MISCELLANEOUS ITEMS

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SECTION 10100

MISCELLANEOUS ITEMS

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

THE ALUMINUM ASSOCIATION (AA)

AA-03	(Sep. 1980, 7th Ed) Designation System for Aluminum Finishes

AMERICAN SOCIETY FOR TESTING AND MATERIALS

PORCELAIN ENAMEL INSTITUTE (PEI)

PEI S 100	(1965) Architectural Porcelain Enamel on Steel for Exterior Use.

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Manufacturer’s Catalog Data; FIO

SD-04 Drawings

Fabrication/Erection/Installation Drawings; FIO

Drawings shall be submitted for each product listed in PART 2 - PRODUCTS. Drawings shall show sizes, details of construction, method of construction, method of assembling, hardware materials, colors, method of mounting, location of each item, specifications for surface preparation and installation of items, and all other details pertinent to installation. For each product, drawings shall identify all parts by name and material. Materials fabricated or delivered to the job site before approval of the drawings shall be subject to rejection.

SD-14 Samples

Chalkboards and bulletin boards; FIO

Directory; FIO

Fire extinguisher cabinets; FIO

Unless otherwise indicated, samples shall be full size, taken from manufacturer's stock, and be complete as required for installation. After approval, samples may be installed in the work provided each sample is clearly identified and its location recorded. Provide one sample(s) of each product listed in PART 2 - PRODUCTS unless otherwise indicated below:

Each type writing and tackboard surface, 150 mm square.

Full-size wall clips or anchoring devices.

Each type of frame, 200 mm long.

Each type of trim and chalk trough, 200 mm long.

Each accessory, full size.

1.3 DELIVERY AND STORAGE

Materials and products shall be delivered to the site in the manufacturer's original unopened containers with brand name and type clearly marked. Materials and products shall be carefully handled and stored in dry, watertight enclosures.

1.4 FIELD MEASUREMENTS

Field measurements shall be taken prior to the preparation of drawings and fabrication to ensure proper fits.

PART 2 PRODUCTS

2.1 GENERAL

Supplementary parts necessary to complete each product item shall be included even though such work is not definitely shown or specified. The Contractor shall furnish to the proper trades all anchors, sockets, or fastenings required for securing items to other construction. Details and specifications of items for which standard products are available are representative guides of requirements for such items. Standard products, generally meeting such requirements, will be accepted, if details of construction and installation are approved by the Contracting Officer.

2.1.1 Metal Thickness

Gages of sheet iron and steel specified are U. S. Standard for sheet and plate. Extruded sections shall be at least 3.125 mm thick, unless otherwise specified or shown on the drawings.

2.1.2 Aluminum Frames

Aluminum frames, trim, and accessories shall be fabricated of 6063-T5 or T6 extruded aluminum alloy. Corners and connections shall be hairline miter or butt joints. Exposed aluminum surfaces shall have a integrally colored satin finish. Satin finish shall be chemically etched medium matte anodic coating, Class II Architectural, 0.4 mil thick, in accordance with AA-03.

2.2 BULLETIN BOARDS

Bulletin board shall consist of a tackboard, aluminum tabular frame, and hinged, swinging aluminum framed glazed doors. Frame shall be secured to the wall be means of concealed screws or bolt hangers. Bulletin board shall consist of a permanent header panel with a general title, such as "Notices" or "Information", and a 6.25 mm cork pinning surface glued to 6.25 mm thick plywood or hardboard backing. Cork shall have a plastic impregnated surface and burlap backing. The cork's surface finish shall be smooth and be free from air pockets, raised cork blemishes, and joint imperfections. Door frame shall have removable glazing bead applied on the inside. Glazing shall be 6.25 mm polished plate glass. Each bulletin board door shall be complete with hardware including key operated lock and full length piano type hinges. Hardware shall be aluminum with anodized finish matching the frame , except hinges shall be either brass with brushed chrome finish or aluminum with satin anodized finish. Bulletin board design shall be as follows:

2.2.1 Colors:

Header panel - white letters on standard blue background; cork panel - medium gray.

2.2.2 Dimensions:

450 mm by 600 mm .

2.2.3 Message:

Heading - upper and lower case helvetica medium, 50 mm capital letter height, flush left.

2.3 DIRECTORY

Directory shall consist of a grooved board for changeable letters, aluminum tabular frame, and hinged, swinging aluminum framed glazed doors. Frame shall be secured to the wall be means of concealed screws or bolt hangers. Directory shall consist of a permanent header panel with a general title, such as "Directory", and a changeable letter board with black-wool-felt, fabric-covered surface glued to 6 mm thick plywood or hardboard removable backing. Space grooves at 6.4 mm o.c. to receive changeable letters. Door frame shall have removable glazing bead applied on the inside. Glazing shall be 6 mm polished plate glass. Each directory door shall be complete with hardware including key operated lock and full length piano type hinges. Hardware shall be aluminum with anodized finish matching the frame, except hinges shall be either brass with brushed chrome finish or aluminum with satin anodized finish. Directory design shall be as follows:

2.3.1 Colors:

Header panel - white letters on standard blue background; cork panel - medium gray.

2.3.2 Dimensions:

450 mm by 600 mm .

2.3.3 Message:

Heading - upper and lower case helvetica medium, 50 mm capital letter

height, flush left.

2.3.4 Letters:

Molded-plastic letters with tabs for engaging grooves in the letter board. Provide manufacturer's boxed letter assortment of not less than 300 letters for each letter size, style, color, and case required.

Letter Size: 13 mm.
Letter Style: Helvetica.
Letter Color: White.
Letter Case: All capitals.

2.4 LIQUID CHALKBOARDS

All chalkboards shall be the products of one manufacturer. Chalkboards shall consist of writing surface, snap-on aluminum frame, chalk trough, mullions, display rail, and accessories. Chalkboards 3.6 meters or less in length shall be in one piece. Larger units shall have one joint in the center, jointed with a metal spline. Faces of the splines shall match, and be in the same plane as the frame.

2.4.1 Writing Surface

2.4.1.1 Porcelain Enamel

Writing surface shall be factory laminated assembly consisting of a face sheet of 0.59 mm sheet steel with porcelain enamel finish, a 9.4 mm to 13 mm thick plywood, particleboard, or hardboard core, and a 0.125 mm thick aluminum backing sheet. The porcelain enamel surface shall be fused to the steel at not less than 760 degrees C in accordance with PEI S 100. Writing surface shall be finished semi-gloss. Color shall be white. A supply of one dozen liquid chalk markers in assorted colors, and a felt eraser, shall be furnished with each chalkboard.

2.4.2 Display (Map) Rail

Display rail shall be snap-on type, 25 mm wide and 6.25 mm thick cork insert in an extruded aluminum frame, and shall be mounted along the top of the chalkboard. Color of cork shall be a natural cork color.

2.5 FIRE EXTINGUISHER CABINETS

Metal fire extinguisher cabinets shall be furnished and installed where shown on the drawings or specified. Cabinets to be located in fire-rated walls shall be fire-rated type, fabricated in accordance with ASTM E 814, and shall be listed by an approved testing agency for 1- and 2-hour combustible and non-combustible wall systems. Rating shall be not less than that of the wall in which cabinet is located. The testing agency's seal shall be affixed to each fire-rated cabinet. Cabinets shall be of the semi-recessed type suitable for 4.5 kg extinguishers. Box and trim shall be of heavy gage rolled steel. Door shall be a rigid frame with full length piano type hinge and double strength (DSA) glass panel. Door and box shall be prime-coated inside and out and have the manufacturer's standard white baked enamel finish inside and out. Cabinet exterior color shall be dark bronze and interior color shall be white.

2.5.1 Door

Door style shall be manufacturer’s standard design, with vertical duo panel with frame. Door shall be same material as cabinet glazed with 3 mm or 6 mm tempered float glass; ASTM C 1048, Kind FT, Condition A, Type I, Quality q3, Class 1 (clear).

2.5.2 Identification

Identify fire extinguisher in cabinet with the words "FIRE EXTINGUISHER" applied to door.

2.6 PROJECTION SCREENS

2.6.1 Front Projection

Heavy duty, hanging, manual spring loaded, wall-mounted type, with glass bead reflecting surface. Size shall be 1750 mm by 1750 mm.

Screen shall be mounted in the location indicated on the drawings in accordance with the manufacturer’s instructions.

2.7 Poly Hose Hanger

Provide plastic hose hanger Model 8015 as manufactured by Gilmour Group, or equal. Use of proprietary name is intended to establish level of quality and not necessarily limit selection to only one manufacturer.

PART 3 EXECUTION

3.1 PREPARATION AND INSTALLATION

Mounting surface preparation and product installation shall be in accordance with the product manufacturer’s written recommendations.

3.2 BULLETIN BOARDS

Bulletin boards shall be mounted with the top edge not higher than 1981 mm above the floor.

3.3 CLEANING

Following installation, dirty or discolored surfaces of the products shall be cleaned, with the products left free of defects. Products that are damaged or improperly installed shall be removed and reinstalled or replaced with new products as directed.

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DIVISION 10 - SPECIALTIES

SECTION 10270

RAISED FLOOR SYSTEM

-- End of Section Table of Contents --

SECTION 10270

RAISED FLOOR SYSTEM

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI A208.1	(1993) Particleboard

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM E 84	(1996a) Surface Burning Characteristics of Building Materials

CEILINGS AND INTERIOR SYSTEMS CONTRACTORS ASSOCIATION (CISCA)

CISCA-01	(1987) Recommended Test Procedures for Access Floors

DEPARTMENT OF COMMERCE (DOC)

DOC PS 1	(1996) Voluntary Product Standard - Construction and Industrial Plywood

INTERNATIONAL CONFERENCE OF BUILDING OFFICIALS (ICBO)

ICBO-01	(1994) Uniform Building Code (3 Vol.)

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 99	(1996; Errata) Health Care Facilities

1.2 SYSTEM DESCRIPTION

Raised flooring shall be installed at the location and elevation and in the arrangement shown on the drawings. The floor system shall be of the stringer type, complete with all supplemental items, and shall be the standard product of a manufacturer specializing in the manufacture of raised floor systems.

1.2.1 Floor Panels

Floor panel testing shall be conducted in accordance with CISCA-01. When tested as specified, all deflection and deformation measurements shall be made at the point of load application on the top surface of the panel. Floor panels shall be capable of supporting 4450 N concentrated load

without deflecting more than 2.03 mm and without permanent deformation in excess of 0.25 mm in any of the specified tests. Floor panels shall be capable of supporting 16.76 KPa per square meter uniform live load without deflection more than 1.02 mm. Floor panels shall be capable of supporting 2670 N rolling load without deflecting more than 1.02 mm and without permanent deformation in excess of 0.51 mm. In accordance with CISCA-01, the permanent deformation limit under rolling load shall be satisfied in all of the specified tests. In the specified tests, the permanent deformation shall be measured after 10 passes with Wheel 1 and after 10,000 passes with Wheel 2.

1.2.2 Stringers

Stringers shall be capable of supporting a 1110 N concentrated load at midspan without permanent deformation in excess of 0.25 mm.

1.2.3 Pedestals

Pedestals shall be capable of supporting a 22.24 kN axial load without permanent deformation.

1.2.4 Pedestal Adhesive

Adhesive shall be capable of securing a pedestal in place with sufficient bonding strength to resist an overturning force of 113 Nm.

1.2.5 Bond Strength of Factory Installed Floor Covering

Bond strength of floor covering shall be sufficient to permit handling of the panels by use of the panel lifting device, and to withstand moving caster loads up to 4.45 kN, without separation of the covering from the panel.

1.2.6 Leakage

When the space below the finished floor is to be an air plenum, air leakage through the joints between panels and around the perimeter of the floor system shall not exceed 0.15 L/s of air per linear meter of joint subjected to 2.5 mm, water gauge, positive pressure in the plenum.

1.2.7 Grounding

The raised floor system shall be grounded for safety hazard and static suppression. Each pedestal shall be grounded to the equipotential grid grounding plates as indicated on electrical drawings.

1.3 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Raised Floor System; GA.

Manufacturer’s descriptive data, catalog cuts, and installation instructions. The data shall include information about any design and

production techniques, procedures and policies used to conserve energy, reduce material, improve waste management or incorporate green building/recycled products into the manufacturer of their components or products. Cleaning and maintenance instructions shall be included. Design calculations which demonstrate that the proposed floor system meets requirements for seismic loading, prepared in accordance with ICBO-01. Certified copies of test reports may be submitted in lieu of calculations.

SD-04 Drawings

Raised Floor System; GA.

Drawings showing layout of the work, sizes and details of components, details at floor perimeter, details at duct work penetrations, bracing to resist seismic or other lateral loads, typical cutout details including size and shape limitation, method of grounding, description of shop coating, and installation height above structural floor.

SD-09 Reports

Tests; GA. Testing of Electrical Resistance; GA.

Certified copies of test reports from an approved testing laboratory, attesting that the proposed floor system components meet the performance requirements specified.

SD-13 Certificates

Raised Floor System; FIO.

Certificate of compliance attesting that the raised floor system meets specification requirements.

SD-14 Samples

Raised Floor System; FIO.

One sample of each panel type and suspension system proposed for use.

1.4 DELIVERY, STORAGE, AND HANDLING

Materials shall be stored in original protective packaging in a safe, dry, and clean location and shall be handled in a manner to prevent damage. Panels shall be stored at temperatures between 4 and 32 degrees C, and between 20 percent and 70 percent humidity.

1.5 EXTRA MATERIALS

Spare floor panels, spare complete pedestal assemblies, and spare stringers shall be furnished at the rate of one space for each 100 or fraction thereof required.

1.6 OPERATION AND MAINTENANCE MANUALS

Provide maintenance instructions for proper care of the floor panel surface. When conductive flooring is specified, require submittal of maintenance instructions to identify special cleaning and maintenance requirements to maintain "conductivity" properties of the panel finish.

PART 2 PRODUCTS

2.1 FLOOR PANELS

2.1.1 Panel Construction

Except for edge panels, panel size shall be 600 by 600 mm. Finished panels shall be within a 0.25 mm tolerance of the nominal size, and shall be square within a tolerance of 0.38 mm measured corner-to-corner. The top surface of panels shall be flat within a 0.51 mm tolerance measured corner-to-corner. Panels shall be permanently marked to indicate load rating and model number.

2.1.1.1 Metal-Clad Wood Core Panels

Wood core panels shall have cores of wood particleboard conforming to ANSI A208.1, Grade 1-M-3, or of plywood conforming to DOC PS 1, EXT-DFPA-C-C. The core shall be not less than 25 mm thick, and shall be faced on both sides with structurally bonded zinc-coated steel sheets not lighter than 0.70 mm (24 gauge). All edges and corners shall be sealed with zinc-coated steel or extruded aluminum. The completed panels shall have a flame spread rating of 25 or less when tested in accordance with ASTM E 84.

2.1.2 Floor Covering

Floor panels shall be surfaced with materials firmly bonded in place with waterproof adhesive. The electrical resistance shall remain stable over the life expectancy of the floor covering. Any antistatic agent used in the manufacturing process shall be an integral part of the material, and shall not be surface applied. Bolt heads or similar attachments shall not rise above the traffic surface.

2.1.2.1 Carpet

Carpet surfacing shall be factory installed using one full carpet square per panel. Carpet shall be as specified in Section 09680 CARPETING and indicated on drawings.

2.1.3 Resilient Base

Base shall be as specified and installed under in Section 09650 RESILIENT FLOORING.

2.1.4 Lifting Device

Two floor panel lifting devices as standard with the floor manufacturer for floor covering provided shall be furnished.

2.2 PANEL SUPPORT SYSTEM

2.2.1 Pedestals

Pedestals shall be of steel or aluminum or a combination thereof. Ferrous materials shall have a factory-applied corrosion-resistant finish. Pedestal base plates shall provide a minimum of 10,300 square millimeter of bearing surface and shall be a minimum of 3 mm thick. Pedestal shafts shall be threaded to permit height adjustment within a range of approximately 50 mm, to permit overall floor adjustment within plus or minus 2.5 mm of the required elevation, and to permit leveling of the

finished floor surface within 1.56 mm in 3000 mm in all directions. Locking devices shall be provided to positively lock the final pedestal vertical adjustments in place. Pedestal caps shall interlock with stringers to preclude tilting or rocking of the panels.

2.2.2 Stringers

Stringers shall be of rolled steel or extruded aluminum, and shall interlock with the pedestal heads to prevent lateral movement.

2.2.3 Underfloor Bracing

Special bracing to resist the effects of seismic or other forces shall be as shown on the approved detail drawings.

2.3 TESTS

Raised flooring shall be factory tested by an independent laboratory at the same position and maximum design elevation and in the same arrangement as shown on the drawings for installation so as to duplicate service conditions as much as possible.

2.3.1 Load Tests

Floor panel, stringer, and pedestal testing shall be conducted in accordance with CISCA-01.

2.4 COLOR

Color of floor covering shall be as specified on drawings.

PART 3 EXECUTION

3.1 INSTALLATION

The floor system shall be installed in accordance with the manufacturer’s instructions and with the approved detail drawings. Open ends of the floor, where the floor system does not abut wall or other construction, shall have positive anchorage and rigid support. Areas to receive raised flooring shall be maintained between 16 and 32 degrees C, and between 20 percent and 70 percent humidity for 24 hours prior to and during installation. Coordinate location of duct work and other penetrations and indicated details on shop drawings.

3.1.1 Preparation for Installation

The area in which the floor system is to be installed shall be cleared of all debris. Structural floor surfaces shall be thoroughly cleaned and all dust shall be removed. Floor coatings required for dust or vapor control shall be installed prior to installation of pedestals only if the pedestal adhesive will not damage the coating. If the coating and adhesive are not compatible, the coating shall be applied after the pedestals have been installed and the adhesive has cured.

3.1.2 Pedestals

Pedestals shall be accurately spaced, and shall be set plumb and in true alignment. Base plates shall be in full and firm contact with the structural floor, and shall be secured to the structural floor with

adhesive.

3.1.3 Stringers

Stringers shall be interlocked with the pedestal caps to preclude lateral movement, and shall be spaced uniformly in parallel lines at the indicated elevation.

3.1.4 Auxiliary Framing

Auxiliary framing or pedestals shall be provided around columns and other permanent construction, at open ends of the floor, and beneath panels that are substantially cut to accommodate utility systems. Special framing for additional lateral support shall be as shown on the approved detail drawings.

3.1.5 Grounding

Each pedestal shall be grounded to the equipotential grid grounding plates as indicated on electrical drawing E-24.

3.1.6 Panels

The panels shall be interlocked with supports in a manner that will preclude lateral movement. Perimeter panels and cutout panels shall be fastened to the supporting components to form a rigid boundary for the interior panels. Floors shall be level within 2 mm measured with a 250 mm straightedge in all directions. Cut edges of steel and wood-core panels shall be painted as recommended by the panel manufacturer. Extruded vinyl edging shall be secured in place at all cut edges of all panel cut-outs to prevent abrasion of cables. Cutouts for conduit and similar penetrations shall be closed using self-extinguishing sponge rubber.

3.1.7 Repair of Zinc Coating

Zinc coating that has been damaged, and cut edges of zinc-coated components and accessories, shall be repaired by the application of a galvanizing repair paint. Areas to be repaired shall be thoroughly cleaned prior to application of the paint.

3.2 TESTING OF ELECTRICAL RESISTANCE

Testing of electrical resistance in the completed installation shall be conducted in the presence of the Contracting Officer. Testing shall be in accordance with NFPA 99 modified by placing one electrode on the center of the panel surface (without floor covering) and connecting the other electrode to the metal flooring support. Measurements shall be made at five or more locations. Each measurement shall be the average of five readings of 15 seconds duration at each location. During the tests, relative humidity shall be 45 to 55 percent and temperature shall be 21 to 24 degrees C. The panels used in the testing will be selected at random and will include two panels most distant from the ground connection. Electrical resistance shall be measured with instruments that are accurate within 2 percent and that have been calibrated within 60 days prior to the performance of the resistance tests. The metal-to-metal resistance from panel to supporting pedestal shall not exceed 10 ohms. The resistance between the wearing surface of the floor covering and the ground connection, as measured on the completed installation, shall be in accordance with paragraph FLOOR COVERING.

3.3 CLEANING AND PROTECTION

3.3.1 Cleaning

The space below the completed floor shall be free of all debris. Before any traffic or other work on the completed raised floor is started, the completed floor shall be cleaned in accordance with the floor covering manufacturer’s instructions.

3.3.2 Protection

Traffic areas of raised floor systems shall be protected with a covering of building paper, fiberboard, or other suitable material to prevent damage to the surface. Cutouts shall be covered with material of sufficient strength to support the loads to be encountered. Plywood or similar material shall be placed on the floor to serve as runways for installation of heavy equipment. Protection shall be maintained until the raised floor system is accepted.

-- End of Section --

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DIVISION 10 - SPECIALTIES

SECTION 10442

INTERIOR SIGNAGE

-- End of Section Table of Contents --

SECTION 10442

INTERIOR SIGNAGE

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI Z97.1	(1984) Safety Glazing Materials Used in Buildings.

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation; submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Interior Signage; FIO.

Submit manufacturer’s catalog data, describing the sign type, materials, and fabrication for each sign type furnished for this project.

SD-04 Drawings

Interior Signage; FIO.

Drawings shall clearly show elevations of each sign type, dimensions, materials, typographic layouts, sizes, methods, finishes, anchorages, and other details of construction as well as relation to supporting and adjacent work where applicable. Drawings shall include typical layouts of each sign type showing graphic quality, letterforms, symbols, and type spacing, and a schedule showing the location of each sign type.

SD-06 Instructions

Installation Procedures; FIO.

Before installation, submit the sign manufacturer’s printed instructions for installation of the signs. Include complete procedures, including preparation of wall or door surfaces, mounting techniq
ues, and recommended adhesives, tapes, or fasteners.

SD-07 Schedules

Sign Schedule; GA.

Prior to sign fabrication, submit sign schedule indicating type, size, location, and message of signs to be furnished and installed.

SD-08 Statements

Qualifications; FIO.

Prior to start of sign installation, submit resumes of work experience for all installers. The work shall be done by qualified, experienced installers, working under a qualified supervisor. The supervisor shall have a minimum of 5 years experience in this area of work and shall be certified by the sign manufacturer.

SD-14 Samples

Interior Signage; GA.

Submit one full size sample of each sign type in the quality and color specified. The samples may be installed in the work provided each sample is identified and location recorded.

SD-19 Operation and Maintenance Manuals

Sign Maintenance Instructions; FIO.

Submit three copies of the sign manufacturer’s maintenance instructions, including one quart of any special cleaning solution recommended and furnished by the manufacturer. Cleaning solution(s) shall be properly marked. Instructions shall include the recommended type of cleaning equipment and materials, cleaning methods, and cleaning cycles.

1.3 DELIVERY AND STORAGE

Deliver signs to the site in manufacturer’s original wrappings and packages clearly labeled with the manufacturer’s name, brand name, size and related information. Each sign shall be individually packaged. Store in a safe, dry, clean, and well ventilated area, protected from damage, soiling, and moisture. Store packages flat. Do not open containers until needed for installation unless verification inspection is required. Protective paper shall be removed only as necessary during fabrication, inspection, or installation in order to avoid scratching, chipping, or crazing the acrylic sheets.

PART 2 PRODUCTS

2.1 GENERAL

Interior signs and graphics shall be provided as a total system. Signs shall be complete with lettering, framing as detailed, and related components for a complete installation. Signs shall be the standard product of a manufacturer regularly engaged in the manufacture of such products and shall essentially duplicate signs that have been in satisfactory use at least 2 years prior to bid opening.

2.2 MATERIALS AND FINISHES

2.2.1 Fasteners

2.2.1.1 Adhesives

Adhesives and adhesive tapes required for plastics, glass, and metals shall be the type recommended by the sign manufacturer.

2.2.2 Plastic

Signs shall be fabricated of acrylic conforming to ANSI Z97.1. Plastic sheet used for signs shall be of new stock and free from defects which would impair strength, durability, and appearance. Clear face sheets shall be matte finish. Colored, opaque face plates and plaques shall be smooth finish.

2.2.3 Signs

Signs, other than building directory signs, shall be clear matte acrylic plastic that is sub-surface printed with both the message and background color, 3.2 mm minimum thickness (including backing plate) sub-surface printed face plates shall be laminated to a backing plate.

2.2.3.1 Fabrication

All signs and sign components shall be shop fabricated, complete and ready for installation. Sign components shall be cut clean. Rounded corners, cut or ragged edges, edge build-up, bleeding or imperfections in the surfaces of the acrylic sheet will not be acceptable.

2.2.3.2 Paints and Inks

Paints and inks required shall be made for the surface material on which they are to be applied and as recommended by the manufacturer of the paint or ink. Prime coats or other surface pretreatments, where applicable, shall be included in the work. Paints, inks and all finishes shall not be the cause of discoloration, deterioration or delamination of any materials used in the fabrication. Paints and inks shall be evenly applied without pinholes, scratches, peeling, or application marks. Paints may be alkyd, acrylic, epoxy, or urethane enamel that are qualified for listing on the applicable GSA qualified products list.

2.2.3.3 Messages

Messages for insert panels of office identification signs (Type A) shall be:

a. Typeset message photographically enlarged to size and mounted on paper card stock.

2.2.3.4 Letterforms and Graphics

1. Typeset Messages

Typeset messages shall be prepared by photo-typesetting equipment. Typesetters' proofs shall not be enlarged more than three times for use as a graphic insert.

2. Color

The colors for sign background letters, and numbers shall be as specified on the drawings.

3. Letter Size and Style

Letterforms, including numbers, shall be helvetica medium style, upper and lower case, and 13 mm, 25 mm, 38 mm, high, as indicated. In addition:

a. Edges and corners of finished letterforms shall be photographically precise, crisp, clean and free of ticks, discontinuous curves, line wave, cut or ragged edges, edge built-up, bleeding, surface pinholes and other imperfections. All letterforms shall conform to the prescribed letterform proportions.

b. Alignment of letterforms shall maintain a horizontal baseline.

c. Letter spacing shall be normal. Expanded or condensed spacing is not acceptable.

2.2.4 SIGNAGE SCHEDULE

See drawings for message content; see PART 2 paragraph "Letter Size and Style" for typeface and size. Type A signs with message inserts for room/office identification, and Type B signs without message inserts for service identification, as indicated on drawings.

PART 3 EXECUTION

3.1 GENERAL

Signs shall be mounted in place after all other interior work in the immediate vicinity, including painting, has been completed. Installed signs shall be uniform and secured.

3.2 INSTALLATION PREPARATION

Inspect all room and areas to have signs. Repair holes, cracks, depressions, or rough areas using recommended materials. Walls shall be free of any foreign materials. Minimum wall temperature before, during and after installation and requirements for conditioning adhesive, shall comply with the sign and adhesive manufacturer’s instructions. Sign installation shall constitute validation by the Contractor that the conditions in the area meet all requirements for satisfactory installation.

3.3 INSTALLATION

Height and location of the signs shall be as directed by the Contracting Officer unless otherwise specified. Signs shall be mounted using foam tape, as recommended by the manufacturer for the specific application.

3.4 SIGN DAMAGE

In event of damage to any sign or sign component, the Contractor shall repair or replace the signs or components as required by the Contracting Officer, at no additional cost to the Government.

3.5 CLEANUP

All installed signs and adjacent surfaces shall be free of tape, adhesive, packing paper, dirt, smudges, scratches, discoloration, or other foreign material or defect. The Contractor shall clean all signs in accordance with the manufacturer’s instructions.

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SECTION TABLE OF CONTENTS

DIVISION 10 - SPECIALTIES

SECTION 10800

TOILET ACCESSORIES

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SECTION 10800

TOILET ACCESSORIES

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to in the text by basic designation only.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM C 1036	(1991) Flat Glass

COMMERCIAL ITEM DESCRIPTIONS (CID)

CID A-A-2398	(Rev B) Curtain, Shower and Window (Metric - SI)

1.2 SUBMITTALS

Government approval is required for submittals with a "GA" designation, submittals having an "FIO" designation are for information only. The following shall be submitted in accordance with Section 01330 SUBMITTAL PROCEDURES:

SD-01 Data

Finishes; GA. Accessory Items; FIO.

Manufacturer’s descriptive data and catalog cuts indicating materials of construction, fasteners proposed for use for each type of wall construction, mounting instructions, operation instructions, and cleaning instructions.

SD-14 Samples

Finishes; GA. Accessory Items; FIO.

One sample of each accessory proposed for use. Approved samples may be incorporated into the finished work, provided they are identified and their locations noted.

1.3 DELIVERY, STORAGE, AND HANDLING

Toilet accessories shall be wrapped for shipment and storage, delivered to the jobsite in manufacturer’s original packaging, and stored in a clean, dry area protected from construction damage and vandalism.

1.4 WARRANTY

Manufacturer’s standard performance guarantees or warranties that extend

beyond a 1 year period shall be provided.

PART 2 PRODUCTS

2.1 MANUFACTURED UNITS

Toilet accessories shall be provided where indicated in accordance with paragraph SCHEDULE. Porcelain type, tile-wall accessories are specified in Section 09310 CERAMIC TILE. Each accessory item shall be complete with the necessary mounting plates and shall be of sturdy construction with corrosion resistant surface.

2.1.1 Anchors and Fasteners

Anchors and fasteners shall be capable of developing a restraining force commensurate with the strength of the accessory to be mounted and shall be suited for use with the supporting construction. Exposed fasteners shall have oval heads and shall be finished to match the accessory.

2.1.2 Finishes

Except where noted otherwise, finishes on metal shall be provided as follows:

Metal	Finish
Stainless steel	No. 4 satin finish
Carbon steel, copper alloy, and brass	Chromium plated, bright

2.2 ACCESSORY ITEMS

Accessory items shall conform to the requirements specified below.

2.2.1 Mirrors, Glass (MG)

Glass for mirrors shall be Type I transparent flat type, Class 1-clear. Glazing Quality q1 6 mm thick conforming to ASTM C 1036. Glass shall be coated on one surface with silver coating, copper protective coating, and mirror backing paint. Silver coating shall be highly adhesive pure silver coating of a thickness which shall provide reflectivity of 83 percent or more of incident light when viewed through 6 mm thick glass, and shall be free of pinholes or other defects. Copper protective coating shall be pure bright reflective copper, homogeneous without sludge, pinholes or other defects, and shall be of proper thickness to prevent "adhesion pull" by mirror backing paint. Mirror backing paint shall consist of two coats of special scratch and abrasion-resistant paint and shall be baked in uniform thickness to provide a protection for silver and copper coatings which will permit normal cutting and edge fabrication.

2.2.2 Mirror, Metal Framed With Shelf (MG)

Mirror shall be framed with type 304 (18-8) one-piece roll formed 19 mm by 19 mm stainless steel angle with continuous integral stiffener. Frame and welded corners shall be polished to a uniform satin finish. Integral 18

gage stainless steel shelf shall have a front and side flanges with welded and polished corners. Mirror glass shall be as specified above. Back of unit shall be 1.0 mm galvanized steel secured to frame with concealed screws, equipped with integral horizontal hanging brackets and separate wall hanger for concealed mounting. Size shall be 457 mm by 610 mm, unless otherwise indicated.

2.2.3 Jumbo Paper Towel Dispenser (JTD)

The paper towel dispenser shall be No. 09736 Jumbo Roll Towel Dispenser as manufactured by Kimberly Clark, or approved equal.

2.2.4 Soap Dispenser (SD)

The soap dispenser shall be No. 92551 100 ml capacity soap dispenser as manufactured by Kimberly Clark, or approved equal.

2.2.5 Toilet Tissue Dispenser (TTD)

The toilet tissue dispenser shall be No. 09686 Escort Jumbo Toilet Dispenser as manufactured by Kimberly Clark, or approved equal.

2.2.6 Shower Curtain (SC)

Shower curtain shall conform to CID A-A-2398, Style I, size to suit conditions. Curtain shall be anti-bacterial nylon/vinyl fabric. Color shall be white. Provide one per shower.

2.2.7 Shower Curtain Rods (SCR)

Shower curtain rods shall be Type 304 stainless steel 32 mm OD by 1.24 mm minimum straight to meet installation conditions.

2.2.8 Robe Hook (RH)

Robe hook pin shall have concealed wall fastenings, and a pin integral with or permanently fastened to wall flange. Maximum projection shall be 50 mm . Design shall be consistent with design of other accessory items. Finish shall be satin.

PART 3 EXECUTION

3.1 INSTALLATION

Toilet accessories shall be securely fastened to the supporting construction in accordance with the manufacturer’s approved instructions. Accessories shall be protected from damage from the time of installation until acceptance.

3.2 CLEANING

Material shall be cleaned in accordance with manufacturer’s recommendations. Alkaline or abrasive agents shall not be used. Precautions shall be taken to avoid scratching or marring of surfaces.

-- End of Section --